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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,948	12/06/2001	Reinhard Berger	GS 0466 A US	5713
7590	06/01/2005		EXAMINER	
Alfred J. Mangels 4729 Cornell Road Cincinnati, OH 45241-2433			WILLIAMS, THOMAS J	
			ART UNIT	PAPER NUMBER
			3683	

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/010,948	Applicant(s) BERGER ET AL.	
	Examiner Thomas J. Williams	Art Unit 3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,5-14,16 and 18-28 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 2,5-14,16 and 18-28 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Acknowledgment is made in the receipt of the amendment filed March 26, 2005.

Claim Objections

2. Claims 10 and 14 are objected to because of the following informalities: claim 10 line 12 recites a "second, transmission housing", firstly the comma should be removed, secondly the phrase second transmission housing is not accurate since a first transmission housing has never been recited, it is suggested the applicant merely refer to this feature as a "transmission housing"; claim 10 line 13, the phrase "and" after "gear" should be changed to "are"; claim 14 lines 11-12, again "second, transmission housing" should be changed to "transmission housing". Appropriate correction is required.

3. Claim 18 objected to because of the following informalities: line 5, "a rotatable gear" should be changed to "the drive gear", since only one rotatable gear is disclosed and illustrated and that gear has already been recited in claim 10. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

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the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 2, 5-9, 10-14, 16 and 18-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,954,178 to Fischer et al. in view of US 6,386,056 to Bachnak et al.

Re-claim 10, Fischer et al. teach in figure 21a an actuator for actuating an automatic clutch, comprising: a first housing (interpreted as the lower portion of housing 2201 that encompasses the rack 2206a) includes an axially extending first receptacle (interpreted as the forward portion of the first housing, the portion containing element 2213); a toothed rack 2206a slides in a linear motion along a rack longitudinal axis in the first receptacle; a second receptacle (interpreted as the rearward portion of the first housing, the portion containing element 2206b) in the first housing adjacent the first receptacle and within which second receptacle is a drive gear 2205, wherein a portion of the second receptacle intercepts the a portion of the first receptacle to define a space that is common to both (the space is interpreted as the passage that exists between the first and second receptacle), wherein the drive gear 2205 is in meshing engagement with the toothed rack for linearly moving the rack within the first receptacle; an electric motor 2202 is drivingly connected with the drive gear 2205, the drive gear is removably connected with the first housing (i.e. the drive gear can be removed from the first housing), an energy accumulator 2207 is positioned between and in contact with the toothed rack and the first housing, wherein the toothed rack is movable in a first direction of movement that is opposite to a force imposed on the toothed rack by the energy accumulator and is movable in a second direction by the force of the energy accumulator, see column 37 lines 57-63, wherein the energy accumulator contacts

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the toothed rack at a first protrusion 2213 extending outwardly from the rack 2206a and is formed in a material locking connection.

However, Fischer et al. fail to teach the construction of the overall housing element 2201, in particular having a transmission housing (such as containing worm gear 2203) removably connected from the first housing and connected with the output side of the electric motor 2202.

Bachnak et al. teach in figure 4 a worm gear and motor housing defining a transmission housing 8. The transmission housing 8 is removably connected with a first housing 9. This provides for easy access into housing 9 and allows for easy removal of the motor for inspection or replacement, see column 1 lines 43-47. It would have been obvious to one of ordinary skill in the art to have provided the actuator assembly of Fischer et al. with a removably connected transmission housing assembly such as the type taught by Bachnak et al., thus allowing for easy access into the first housing as well as an easy means by which to inspect the motor and drive elements.

Re-claims 2, 19, 22 and 26, the forward portion of the rack is illustrated as being cylindrical (note the fade lines), the first receptacle is hollow.

Re-claims 5 and 6, the first protrusion is a protrusion ring and is integrally formed with the rack.

Re-claims 7-9, the energy accumulator contacts the housing at an inwardly-extending second protrusion within the housing, the second protrusion is in the form of a ring and is integrally formed with the housing.

Re-claims 11 and 23, the toothed rack is slidably received within the first receptacle.

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Re-claim 12, the toothed rack is supported in bearings (such as 2208 and 2212) carried adjacent end areas of the first receptacle. Each of the bearings is in fact adjacent an end area of the first receptacle.

Re-claim 13, the bearings are broadly interpreted as journal bearings and are supported (either directly or indirectly) by the first receptacle.

Re-claim 14, Fischer et al. teach in figure 21a an actuator for actuating an automatic clutch, comprising: a first housing (interpreted as the lower portion of housing 2201 that encompasses the rack 2206a) includes an axially extending first receptacle (interpreted as the forward portion of the first housing, the portion containing element 2213); a toothed rack 2206a slides in a linear motion along a rack longitudinal axis in the first receptacle; a second receptacle (interpreted as the rearward portion of the first housing, the portion containing element 2206b) in the first housing adjacent the first receptacle and within which second receptacle is a drive gear 2205, wherein a portion of the second receptacle intercepts the a portion of the first receptacle to define a space that is common to both (the space is interpreted as the passage that exists between the first and second receptacle), wherein the drive gear 2205 is in meshing engagement with the toothed rack for linearly moving the rack within the first receptacle; an electric motor 2202 is drivingly connected with the drive gear 2205, the drive gear is removably connected with the first housing (i.e. the drive gear can be removed from the first housing), the toothed rack is supported in bearings (such as 2208 and 2212) carried adjacent end areas of the first receptacle. Each of the bearings is in fact adjacent an end area of the first receptacle, the bearings are broadly interpreted as journal bearings and are supported (either directly or indirectly) by the first receptacle.

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However, Fischer et al. fail to teach the construction of the overall housing element 2201, in particular having a transmission housing (such as containing worm gear 2203) removably connected from the first housing and connected with the output side of the electric motor 2202.

Bachnak et al. teach in figure 4 a worm gear and motor housing defining a transmission housing 8. The transmission housing 8 is removably connected with a first housing 9. This provides for easy access into housing 9 and allows for easy removal of the motor for inspection or replacement, see column 1 lines 43-47. It would have been obvious to one of ordinary skill in the art to have provided the actuator assembly of Fischer et al. with a removably connected transmission housing assembly such as the type taught by Bachnak et al., thus allowing for easy access into the first housing as well as an easy means by which to inspect the motor and drive elements.

Re-claims 16 and 24, the gear 2205 is interpreted as a spur gear.

Re-claims 18 and 25, the toothed rack 2206a is an elongated member and includes along one side of an outer surface a series of transversely extending teeth 2206b that engage a rotatable gear 2205.

Re-claims 20 and 27, the transversely extending teeth extend around less than 360 degrees of the outer surface of the rack 2206a.

Re-claims 21 and 28, the toothed rack engages a major portion of a longitudinally extending inner wall surface of the first receptacle, specifically at 2208.

Response to Arguments

7. Applicant's arguments filed March 26, 2005 have been fully considered but they are not persuasive. It is the opinion of the examiner that the housing element 2201 of Fischer et al. is

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comprised of several components, otherwise placement of the internal gear mechanisms would have been extremely difficult. It is further noted that the drawings appear to be merely illustrative and are not detailed enough to presume that the housing is a single molded element. However, Bachnak et al. is provided as a reference that teaches the formation of a housing from several individual parts, such as a first housing 9 and a transmission housing 8. It is believed that using a combination of parts to form a single housing is not novel in the art, and would provide easy access for assembly and repair.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Thomas Williams whose telephone number is 571-272-7128.

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The examiner can normally be reached on Monday-Thursday from 6:30 AM to 4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Bucci, can be reached at 571-272-7099. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-6584.

TJW

May 27, 2005

THOMAS WILLIAMS
PATENT EXAMINER

Thomas Williams

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5-27-05